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Ronald Schuster remembers exactly how he felt when he heard the Zion Nuclear Power Station would close, a decision that rocked the community that relied on it for much more than electricity.

"It was literally like someone got hit in the solar plexus," said Schuster, a radiation-protection safety officer who was herded into a meeting at 8:05 a.m. Jan. 15, 1998, to hear the news.

Ten years later, new owner Exelon has proposed dismantling the plant near Lake Michigan, opening up more than 250 acres of prime lakefront property by 2018. The plan calls for taking the two-reactor facility apart and moving everything but spent fuel rods out of state by rail.

The idea is bittersweet to locals who lived through the boom, when the plant pumped millions of dollars into the local economy each year; the bust, when jobs and money dried up; and now a measured recovery with more conventional development.

"The plant became a way of life in the community," said Mayor Lane Harrison, 57, who grew up in Zion. "We were relying on that one golden goose. ... Everybody was just hoping against hope that they wouldn't close."

It is the story of a classic American mill town trying to reinvent itself after the industry left town -- except the mill is a shuttered nuclear plant that generated both controversy and enough electricity to light up every household in Cook County. The plant may be dismantled, but the radioactive waste from it is likely here to stay for years to come.

Nationally, nuclear power is making a comeback, with new incentives prompting proposals for the first new plants in decades. But the Zion story underscores the reality that there is still no resolution about how to permanently store the spent fuel.

Under Exelon's proposal, Zion's fuel rods would be encased in concrete-and-lead casks 17 feet tall and left on-site, a source of concern to political leaders trying to quell fears of terrorism.

Changes after 9/11

Like other nuclear plants, Zion's was built near a large body of water, with a pipe 18 feet in diameter extending into Lake Michigan that pulled in thousands of gallons daily. The water circulated through a cooling system and was discharged back into the lake, heated but clean and non-radioactive, Exelon spokesman Neal Miller said.

Security was beefed up after the Sept. 11, 2001, terrorist attacks, with concrete barriers and checkpoints added along the driveway. It is a contrast from early days when "you were able to drive up to this building to deliver a pizza," Miller said.

The plant's proximity to the lake bothers U.S. Rep. Mark Kirk (R-Ill.), who has pushed for the fuel rods to be moved to Yucca Mountain in Nevada, where it faces political opposition.

"My principal interest is we move 1,000 tons of radioactive spent fuel that's only 100 yards from Lake Michigan right now," Kirk said. "Zion is so wet and so close to the largest freshwater body of water in America that it is probably one of the places you least want [spent nuclear fuel] stored in the United States."

Added David Kraft, director of Nuclear Energy Information Service, a Chicago watchdog group: "I don't have the confidence in the casks that the [Nuclear Regulatory Commission] does. They haven't demonstrated the casks won't break open if a national airliner took a nose-dive into them."

Exelon officials describe their methods as safe, highly regulated and closely monitored. They say the concrete containers were tested under extreme conditions, such as earthquakes, tornadoes, hurricanes and floods. Once in the casks, the fuel will be moved another 400 feet

from the lake, Miller said.

"This type of storage technique has become fairly common," said James Stubbins, who heads the Nuclear, Plasma and Radiological Engineering Department at the University of Illinois at Urbana-Champaign. "The storage casks, in my mind, are perfectly safe."

Speculation remains about how much, if any, of the land would be available for private development if Exelon's plans are approved.

Brent Paxton, 44, a lifelong Zion resident and Lake County Board member, said the state already owns much of the surrounding property, including a marina to the north and Illinois Beach State Park, and may seek to keep the land undeveloped. He is less concerned about people shying away from development because of the fuel rods, since early fears about the plant did not play out.

"Initially, it was thought that just having the plant there would [negatively] affect property values, but it didn't," Paxton said.

Still, some people won't mourn the plant's dismantling.

"People were worried there would be a blowup while it was open," said Wayne Wasowitz, 52, of neighboring Winthrop Harbor, who recalled that some parents told their kids to stay away from the property out of fear they would be electrocuted. "I will be happy to see it dismantled and completely gone."

Feeling the loss

If all goes as planned, Exelon will dismantle the plant a decade earlier than expected by turning its license over to a private company, EnergySolutions Inc. in Salt Lake City, which says it can do the job more cheaply and quickly.

Officials expect the NRC to rule on the plan this year.

The plant looks eerily untouched, but the community still feels the loss.

Before the facility's closing, employees knew that then-owner Commonwealth Edison needed to replace two expensive steam generators, and the plant had been on temporary shutdown for months after an operator error drew a sharp rebuke from the NRC.

Officials said the plant closed because of the high cost of needed upgrades and equipment.

Today, 48 employees remain at the facility to operate two synchronous condensers that stabilize electrical voltage in the region. The radioactive spent fuel rods are stored in a deep pool of water to keep them cool, and the plant's two reactors no longer produce energy, nuclear or otherwise. Schuster is now plant manager at the 35-year-old facility.

The plant's closing marked a crushing blow to blue-collar Zion, where it had served as the city's largest employer and taxpayer. Nearly 2,000 out-of-town contractors left town immediately, and the 860 regular full-time workers began looking for new jobs.

Some local businesses saw sales plummet by 25 percent to 30 percent, said Eugene Swindle, who said his auto shop lost up to $6,000 monthly when workers stopped coming in.

Across the street, a new owner of Dunkin' Donuts panicked when shift workers no longer filled the store at midnight, and he returned the store to its previous owner.

ComEd agreed to gradually lower its tax contributions through 2005, giving Zion schools time to recover revenue from economic growth and higher tax rates. Today, Zion Elementary School District 6 has the highest tax rate in Lake County.

A slow recovery

Zion officials say the city, near the Wisconsin state line, is on an economic upswing with the help of three tax increment finance districts and a new business park.

The city, created in 1900 by Christian minister John Alexander Dowie, who envisioned a city ruled by God and free of worldly evil, never took off as planned and Zion struggled financially, according to historians.

Harrison's first term as mayor started in 1998, about the time the plant closed, and he began working to lure businesses to town.

The city of about 23,000 is now home to a FedEx distribution center and chains such as Applebee's, Walgreens, CVS Pharmacy and Country Inn & Suites.

When a scheduled Super Wal-Mart opens this spring, Harrison estimates the new companies will make up at least half of the tax revenue lost by the plant's closing.

Harrison sees better days ahead, envisioning condos and bike trails on the lakefront once the plant is gone.

By then, Schuster, who takes pride in keeping the shuttered plant clean and functional, expects to be retired. Its closing "broke my heart, it really did," he said. "When you've dedicated your life, when you grew up with this thing, there's a lot of ownership."